



University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7381

December 9, 1983

RP:0035

Mr. Shinji Soneda
Environmental Protection
and Health Services Division
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Soneda:

Draft Development Documents for Potential
NPDES and Zone of Mixing Permits
Lihue Sewage Treatment Plant
Lihue, Kauai

In response to your request of November 4, 1983 we have reviewed the development documents you provided. We have been assisted in this review by Brent Gallagher, Oceanography; Hans Krock, Ocean Engineering; Jacquelin Miller and Pamela Bahnsen, Environmental Center.

In general our reviewers have found the procedures set forth in the documents to represent reasonable and logical approaches to the evaluation of environmental conditions pertinent to the discharge of sewage effluent in the coastal waters of Kauai. We concur with the recommendation to direct the outfall toward Kamilo Point as the most environmentally appropriate choice.

Because the engineering design, and in particular the depth, distance, and direction of the outfall, is so critically tied to the baseline numeric data for estimates of diffusion coastal circulation and mixing, it would seem wisest to re-check the original data values for accuracy prior to letting construction contracts or issuing the discharge permits.

We note also that these documents have evaluated the construction design in terms of satisfying the 1973 State Water Quality Standards. It should be recognized that new water quality standards are now in effect and the proposed design should be reexamined to see if engineering modifications will be required to meet the new standards. This is of particular concern since we have noted that as presently planned, water quality standards will be exceeded one or more times per year.

Mr. Shinji Soneda


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The report recognizes the potential need for emergency chlorination of the sewage should a temporary failure of the treatment plant occur. It should also be recognized that some short term chlorination may be needed in the event of persistent onshore winds/ currents which could bring the effluent in contact with the shoreline.

It is our understanding that multi-port jets in sewage diffusers elsewhere in the state, have experienced some sediment clogging problems in areas near offshore sand deposits or where subject to long shore sand transport. If these conditions prevail at the site of this outfall, the location of the ports in the diffusers should be carefully sited.

Yours truly,



Doak C. Cox
Director

cc: Brent Gallagher
Hans Krock
Jacquelin Miller
Pamela Bahnsen